

Serial No. 09/851,968  
Docket No. OSP-10578

**REMARKS**

**REQUEST FOR WITHDRAWAL OF FINALITY OF OFFICE ACTION**

The final rejection relies on Shahid, United States Patent No. 6,352,372 in rejecting the claims of this application, citing Shahid for the showing of a housing member having a hole through it. The claims of this application have recited an end member with a through hole since at least the Amendment filed September 15, 2003.

Shahid was first cited in the Office Action of October 16, 2003, but was not relied upon as a basis for rejection in that Office Action. Indeed, with the claims including a through hole and Shahid of record, this application received a Notice of Allowance on February 26, 2004. That Notice of Allowance was withdrawn, and a new Office Action was issued on April 30, 2004, rejecting the claims, but without reliance of Shahid, which was already of record.

Thus, there have been two Office Actions and two responses between the citing of Shahid and the September 28, 2004 Office Action, without Shahid providing a basis for rejection. Only now, in the September 28, 2004 Office Action does the Examiner contend that Shahid provides a basis for rejection.

MPEP §706.07(a) states:

"Under present practice, second or any subsequent actions on the merits shall be final, except where the examiner introduces a new ground of rejection that is neither necessitated by applicant's amendment of the claims nor based on information submitted in an information disclosure statement filed during the period set forth in 37 CFR 1.97(c) with the fee set forth in 37 CFR 1.17(p)." (Emphasis added.)

Reliance on Shahid to show a through hole is a new ground of rejection. The claims

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included a through hole during each of the preceding two Office Actions. Thus, amendment of the claims did not necessitate this new ground of rejection. No Information Disclosure Statement was filed to submit Shahid. Consequently, the Office Action should not have been a final rejection. Accordingly, withdrawal of the finality of the Office Action is in order and is respectfully requested.

#### **AMENDMENT**

Entry of this Amendment is proper because it narrows the issues on appeal and does not require further search by the Examiner.

Claims 1-4, 7, 13, 14, and 16-18 are presently pending in this application. Claims 1, 7, and 16-18 have been amended to more particularly define the invention. Claim 15 has been canceled in the interest of expediting prosecution.

Applicant gratefully acknowledges the indication that claims 15, 16, and 18 would be allowable if rewritten in independent form. The substance of claim 15 has been incorporated into claim 1, and claim 16 has been amended to be dependent from claim 1. Therefore, claim 1 and its dependent claims 2-4, 13, 14, and 16 are allowable.

Claim 7 was rejected under 35 U.S.C. §103(a) as being unpatentable over Kropp, U.S. Patent No. 6,227,722 B1 in view of Bruce, et al., U.S. Patent No. 6,312,581 B1 and Shahid, U.S. Patent No. 6,352,372 B1. This rejection is respectfully traversed.

#### **THE CLAIMED INVENTION**

In the exemplary embodiment illustratively set forth in claim 7, Applicant's

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invention is an optical element housing member which includes a body member having a longitudinally extending hole through it for accommodating an end of a substrate and optically connecting the substrate to an optical element. The hole has a top surface, a bottom surface, a first side surface, and a second side surface. A step for positioning the substrate is formed on the top surface of the hole, along each longitudinally extending side surface of the hole.

## THE PRIOR ART REFERENCES

### The Kropp Reference

Kropp discloses a component module which includes elongated optical waveguides on a substrate, on the upper surface of which a pair of first positioning structures is formed extending in a longitudinal direction of the substrate. These positioning structures are described as "guide bars" at, for example, column 3, line 62, and as "ribs" at, for example, column 4, line 63 and column 5, line 3 of Kropp. The component module further includes a plug connector member having a longitudinally extending recess or cavity in its lower surface for accommodating and fixing the substrate. The recess has a top surface, a first side surface, and a second side surface. A pair of grooves (see Kropp at, for example, column 4, lines 29-31 and 66) is formed in the top surface of the recess, so as to fit the guide bars or ribs on the substrate when the substrate is inserted in the recess. No steps are disclosed or suggested.

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#### **The Bruce, et al. Reference**

Bruce discloses a process for fabricating a silica-based optical device on a silicon substrate. The device has a cladding formed in a silicon substrate. The device also has an active region, and that active region is formed on the cladding. The cladding is fabricated by forming a region of porous silicon in the silicon substrate. The porous silicon is then oxidized and densified. After densification, the active region of the device is formed on the cladding. No steps are disclosed or suggested.

#### **The Shahid Reference**

Shahid discloses an optical connector. The Figure 7 embodiment, on which the rejection of claim 7 is based, includes an optical connector 22 including elongated optical fiber ribbons. On each of the upper surface and the lower surface of the connector a pair of truncated V-shaped alignment grooves 34 is formed, extending in a longitudinal direction of the connector. See Shahid at column 5, lines 40-67. The optical module further includes an alignment receptacle 90 having a longitudinally extending hole through it for accommodating and fixing the optical connector. A pair of truncated V-shaped alignment ridges 102 extends from each of the top surface and the bottom surface of the hole so as to fit the truncated V-shaped alignment grooves on the optical connector when the optical connector is inserted in the hole.

From line 7 to line 34 of column 7, Shahid goes into great detail about the critical dimensions of truncated V-shaped grooves 34 and truncated V-shaped ridges 102, and brings out that their size is in the micron range, thus making clear the complexity of both designing

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and manufacturing his optical connector.

No steps are disclosed or suggested.

#### ARGUMENT

The references show ribs and grooves or ridges and grooves to align a substrate within a hole in a connecting member. The ribs and the ridges have critical dimensions, not only of height, but also of width. Likewise, the grooves have critical dimensions of depth and width. The truncated V-shaped ridges and grooves have further criticality as to the angle of the V and the width of each end.

In contrast, by providing steps on the top surface of the hole, along each longitudinally extending side edge thereof, the claimed invention has fewer critical dimensions, permitting less complex design and manufacturing processes.

None of the references shows or suggests steps. The Office Action contends that providing steps is a mere rearrangement of parts, and cites *In re Japikse*, 86 U.S.P.Q. 70 as support for the contention that a rearrangement of parts would be obvious. However, the claimed invention is more than a rearrangement of parts. A rearrangement of parts would only move the ribs or truncated V-shaped ridges closer to the edge of the opening in the alignment receptacle and the corresponding grooves closer to the edge of the optical connector. They would still be ribs, truncated V-shaped ridges, and grooves; not steps. The moved ribs, truncated V-shaped ridges, and grooves would still have the same critical dimensions, and so the same complexity of the design and manufacturing processes.

The invention of claim 7 avoids this by utilizing steps on the top surface of the hole,

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along each longitudinally extending side edge of the hole. These steps have fewer critical dimensions, and so the optical element housing member of claim 7 is more economical to design and to manufacture.

Even a slight difference from the prior art can be a non-obvious, and so patentable, change. *Demaco Corp. v. F. Von Langsdorff Licensing Ltd.*, 851 F.2d 1387, 7 USPQ 2d 1222 (Fed. Cir. 1988). Thus, assuming that the difference of the present claims over the prior art is slight, still it is non-obvious, and so is patentable.

It is accordingly urged that claim 7 and its dependent claims 17 and 18 are allowable.

## CONCLUSION

In view of the foregoing, Applicant submits that the finality of the Office Action should be withdrawn. Applicant further submits that claims 1-4, 7, 13, 14, and 16-18, all the claims presently pending in the application, are patentably distinct over the prior art of record and are allowable, and that the application is in condition for allowance. Such actions would be appreciated.

Should the Examiner find the application to be other than in condition for allowance, the Examiner is requested to contact the undersigned attorney at the local telephone number listed below to discuss any other changes deemed necessary for allowance in a telephonic or personal interview.

To the extent necessary, Applicant petitions for an extension of time under 37 CFR §1.136. The Commissioner is authorized to charge any deficiency in fees, including


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extension of time fees, or to credit any overpayment in fees to Attorney's Deposit Account

No. 50-0481.

Respectfully Submitted,


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**CERTIFICATION OF FACSIMILE TRANSMISSION**

I hereby certify that I am filing this Request for Withdrawal of Finality of Office Action, and Amendment Under 37 C.F.R. §1.116 by facsimile with the United States Patent and Trademark Office to Examiner Hae M. Hyeon, Group Art Unit 2839 at fax number (703) 872-9306 this 30th day of November 2004.

  
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